

Lower limb amputation by emergency medical technicians: a case report from scene

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Abstract

Background Agricultural trauma resulting from machinery poses unique challenges due to severe injuries, delayed access to emergency care in rural areas, and complex extrication procedures. This case study describes the prehospital management and subsequent field amputation of a lower limb performed by Emergency Medical Technicians (EMTs).

Case presentation A 45-year-old male tractor driver sustained extensive lower-limb entrapment in a rotary agricultural device, resulting in severe injuries to the tibia, fibula, and femur. Upon arrival, the EMTs observed bystanders attempting to remove the blades of the machinery. They began caring for the patient according to the XABCDE protocol. The patient experienced severe pain; the EMTs attempted to relieve it, but their efforts were ineffective. Given that extrication of the mangled foot would be time-consuming, the EMTs decided to free the patient by amputating the remaining limb segment. Simultaneously, they requested the helicopter ambulance. However, because of the long time for the helicopter to arrive at the scene, they decided to transport the patient via ground ambulance. They initiated intravenous fluid therapy and notified the receiving hospital of the need for a potential blood transfusion. Upon arrival at the hospital, the patient presented with a decreased level of consciousness.

Conclusions This case revealed several critical challenges for the EMTs: participatory decision-making with the patient's family, inadequate pain management, lack of proper amputation equipment, prolonged helicopter ambulance response, and the mission's subsequent psychological toll. EMTs must be prepared to manage rare, complex cases both clinically and ethico-legally. Therefore, such scenarios should be formally integrated into ongoing training, along with necessary post-mission psychological support.

Keywords Emergency medical technicians, Agricultural trauma, Field amputation, Prehospital pain management, Ethical decision-making